REMARKS

Applicants cancel claims 12,16, 19, 35, and 38.

Claim Rejections – 35 U.S.C. §103

Claims 1-11, 13-15, 17-34, and 36-38 stands rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent number 5,284,492 issued to Dublin (Dublin). In order to maintain a rejection the Examiner has the burden of providing evidence of prima facie obviousness. See MPEP §2143. See also In Re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In order to prove prima facie obviousness, the Examiner must provide evidence in the prior art of a motivation to combine or modify a reference, a reasonable expectation of success, and a teaching of each and every claimed element. Id.

Amended Claim 1 recites "...a coupling agent for maintaining phase stability at high temperatures and shear pressures in said internal combustion engine." Dublin does not teach this limitation. Applicants have read the entirety of Dublin and can find no reference to a coupling agent. In particular, Applicants have not found any reference to a coupling agent that maintains phase stability at the high temperatures and sheer pressures in an internal combustion engine. Instead, Dubin teaches "a fuel oil composition comprising an emulsion of water and a fuel which is used as a combustion fuel for a gas turbine." (Col. 1, lines13-19). Marks Standard Handbook for Mechanical Engineers (McGraw-Hill 10th edition) makes it clear that internal combustion engines and turbines are not the same by separating internal combustion engines from turbines and placing them in two separate chapters. As would be appreciated by one having

ordinary skill in the art, the fuel delivery system for a turbine is fundamentally different from that of an internal combustion engine, making the requirements for fuel stability different. It is obvious that a fuel applicable in a gas turbine cannot be immediately assumed to work in an internal combustion engine. A good example of this is kerosene, which is commonly used in aviation gas turbines but will not burn in an internal combustion engine using compression ignition. Therefore, any teachings of Dubin have no relation to the present invention, as one with ordinary skill in the art would not associate them readily. Furthermore, Dublin does not teach the coupling agent recited in claim 1.

Claim 1 further recites " wherein said emulsion has an average droplet size ranging from about 0.1 microns to about 1 micron." Dublin also does not teach this limitation. In fact the only reference to droplets in Dublin is at col. 4, lines 38-44 which states:

> the inventive emulsions are prepared such that the discontinuous phase preferably has a particle size wherein at least about 70% of the droplets are below about 5 microns Sauter mean diameter. More preferably, at least about 85% and most preferably at least about 90% of the droplets are below about 5 microns means diameter for emulsion stability.

This does not teach an average droplet size of about .2 micron to 1 micron. The surfactant packet of the present invention allows for such small droplets that allow for more surface area for the emulsion. Thus, the droplet size may be much smaller than those of other emulsions such the emulsion taught in Dublin. Therefore, Applicants respectfully request that claim 1 be allowed.

Since Claims 2-11, 13-15, and 17-18 depend from Claim 1, Applicant respectfully submits that Claims 2-11, 13-15 and 17-18 are also patentable as they contain the same limitations as Claim 1.

The same arguments made above with respect to the patentability of Claim 1 are applicable to the patentability of Claim 20 as well.

Since Claims 21-34, 36-37, and 39-45 depend from Claim 20, Applicant respectfully submits that Claims 21-34, 36-37, and 39-45 are also patentable as they contain the same limitations as Claim 20.

If the Examiner has any questions regarding this application, the Examiner may telephone the undersigned at 775-586-9500.

Respectfully submitted,
SIERRA PATENT GROUP, LTD.

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William P. Wilbar
Reg. No.: 43,265

Sierra Patent Group, Ltd.
P.O. Box 6149
Stateline, NV 89449
(775) 586-9500
(775) 586-9550 Fax